



# PRODUCT BROCHURE

**BLACK STUMP**

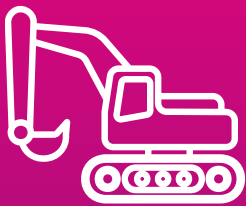
SMART GREEN POWER FOR A BETTER PLANET

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# The proven alternative to dirty diesel:



# Clean energy for commercial and impact industries

**CONSTRUCTION****INFRASTRUCTURE****MINING****TRANSPORTATION****REMOTE  
COMMUNITIES****DEFENCE****RAPID AID &  
DEVELOPMENT****AGRICULTURE &  
AQUACULTURE****GOVERNMENT &  
EVENTS**



● OUR MISSION

# Eliminate diesel

Our mission is clear: to replace diesel generated power. Diesel fuel contributes massively to the world's CO<sub>2</sub> emissions. Organisations will never achieve net zero with diesel still in place. By reducing the harsh environmental impacts of diesel-powered electricity generation, Black Stump Technologies makes a positive impact for people and on the planet. By providing access to sustainable technology solutions, we are able to empower organisations, communities, and individuals with the ability to change their economic and social circumstances.

UP TO 70%

Reduction in operating costs

UP TO 90%

Reduction in CO<sub>2</sub> emissions

100% reduction

Achievable depending on  
individual use cases

● OUR SOLUTION

# Mobile, modular, scalable and rapidly deployable

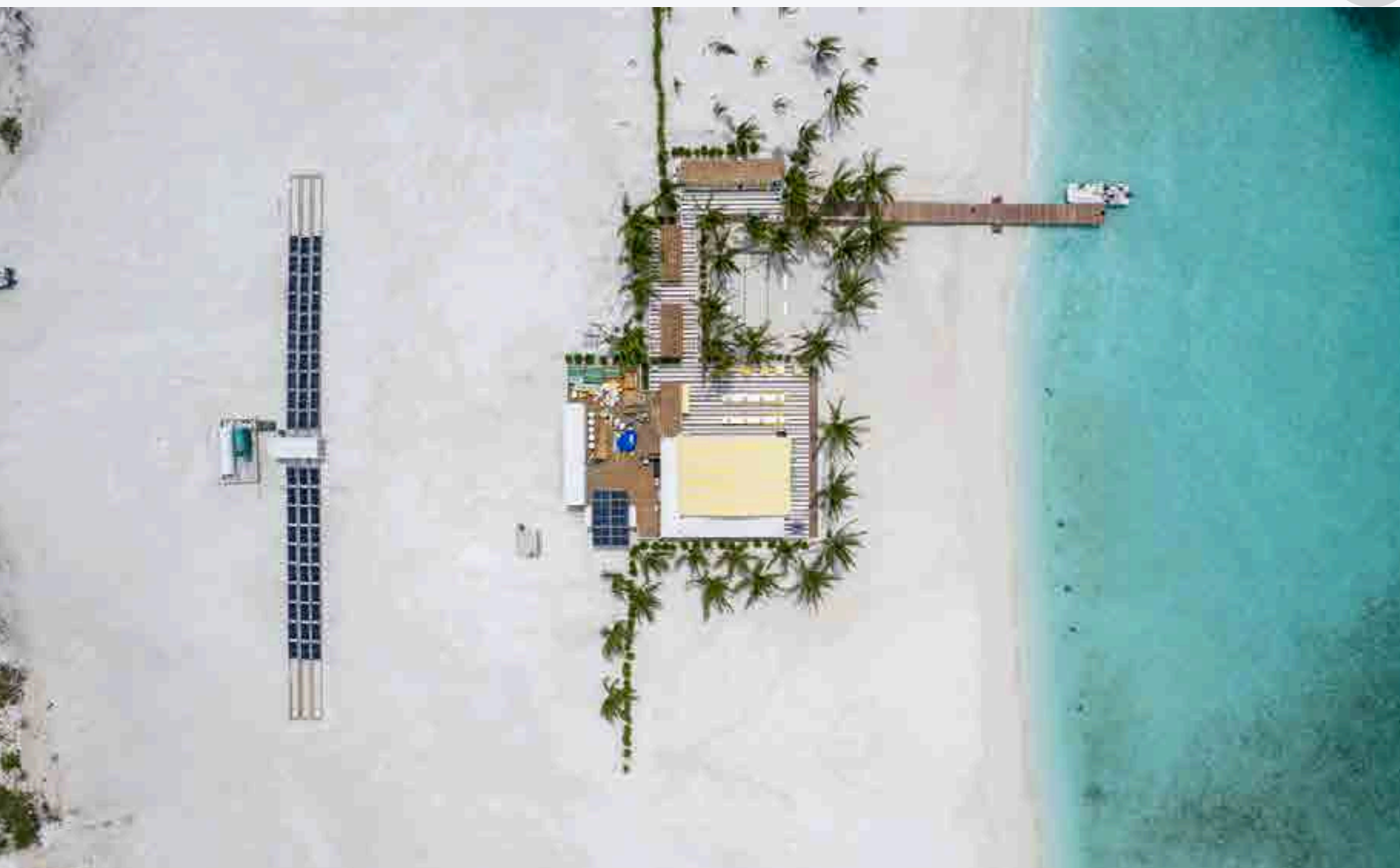
We specialise in the provision of mobile renewable energy and refrigeration technology which can be rapidly deployed in remote, regional and urban environments within 30 minutes. Solarators® provide clean and renewable power to solve the issues of refrigeration, clean water, food hygiene, sanitation, medical storage, and cold supply chain in on-grid and off-grid locations. These robust, reliable, and turnkey solutions are used across industry and can be optimised to suit a variety of requirements, such as diesel logistics issues, tight space restrictions, or complex power consumption patterns.



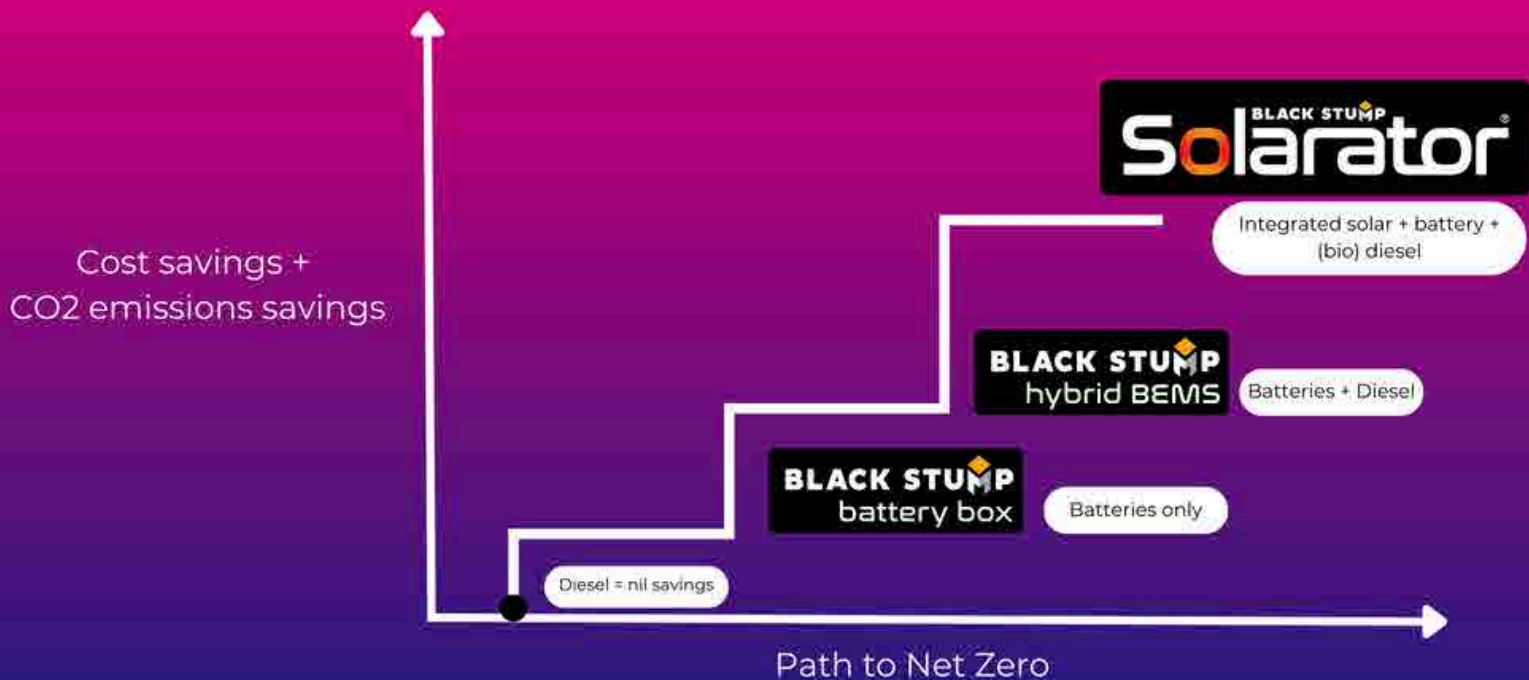
● OUR DIFFERENTIATOR

# Leverage the power of data and evidence-based methodology

With years of expertise in the field and use cases in various industries, Black Stump Technologies leverages performance data and a proprietary modeling tool in forecasting your Solarator® performance against diesel as well as predicting financial and environmental savings. Our clients are also equipped with reporting capabilities and performance analysis of their Solarator® units. Through our secure portal, clients can generate custom, downloadable reports in minutes saving them time, money, and effort spent on data analysis.



## ● OUR PRODUCTS



# Renewable solutions at every stage of your net zero journey

With our Solarators® leveraging the power of clean solar energy, your organisation will continue to increase operational and fuel cost savings while increasing the amount of carbon emissions saved. But we also understand that businesses may be at different stages of energy transition so ditching diesel can be a long journey.

Hence, Black Stump Technologies offers products that meet your needs wherever you are on your journey. Our Solarators® replace a wide range of diesel gensets from 12kVA to 150+ kVA. We also offer hybrid BEMS (battery + diesel) units. Our hybrid BEMS and REMS units can be configured into a microgrid or a mobile solar farm if combined with Black Stump's solar arrays. And if you're simply after a battery energy storage system, we have 50kW to 1000kW battery boxes, too.



# CLEAN POWER FROM THE SUN

Our Solarators® suit a variety of site conditions and industries that need to replace a wide ranging size of diesel generators. Whether you're dealing with tight space issues, difficult diesel logistics, unique site power consumption, or harsh weather patterns, we have the ideal Solarator® solution that will save you money and reduce emissions. We can also adapt and custom build a Solarator® for very specific requirements like an office solution, morgue, mobile data centre and the like.



**SOLAR + BATTERY  
+ (BIO) DIESEL**



**MOBILE &  
MODULAR**



**OPERATIONAL IN  
LESS THAN 30 MINS**



**OPTION TO ADD  
SOLAR ARRAYS**



**SIGNIFICANTLY  
REDUCED NOISE**



**DOWNLOADABLE ESG  
REPORT IN MINUTES**



# **BLACK STUMP** **Solarator®** fold-out 50+

Nominal output kVA	<b>53</b>
Nominal output kW	<b>43</b>
Payback (years)	<b>1.8 to 2.4</b>
Fuel savings p.a.	<b>\$149,000</b>
CO <sub>2</sub> savings p.a.	<b>179,000 kgs</b>

The Fold-out range is designed for sites and locations with sufficient space for a full roll-out of solar panels. These robust Solarators® are portable power stations that provide continuous power, 365 days a year, 24/7 in all conditions for your specific requirements.



Every effort has been made to provide information that is current and accurate. Nevertheless, specifications are subject to change without notice. Images are for reference only and may not reflect the actual configuration of the product.

**BLACK STUMP**  
SMART GREEN POWER FOR A BETTER PLANET

# **BLACK STUMP** **Solarator®** fold-out 75+

Nominal output kVA	<b>76</b>
Nominal output kW	<b>61</b>
Payback (years)	<b>1.8 to 2.3</b>
Fuel savings p.a.	<b>\$179,000</b>
CO <sub>2</sub> savings p.a.	<b>215,000 kgs</b>

As market leaders with years of proven experience in the field, our Fold-out range is designed for sites and locations with sufficient space for a full roll-out of solar panels. Our Solarators® are reliable and portable power stations that provide continuous power, 365 days a year, 24/7 in all conditions for your specific requirements.



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**BLACK STUMP**  
SMART GREEN POWER FOR A BETTER PLANET



Nominal output kVA	<b>27</b>
Nominal output kW	<b>21</b>
Payback (years)	<b>1.8 to 2.2</b>
Fuel savings p.a.	<b>\$88,000</b>
CO <sub>2</sub> savings p.a.	<b>118,000 kgs</b>



Our Solarator® compact range is designed for space-restricted locations that need either full or partial off-grid power generation. This range comes with a different configuration of solar, batteries, and (bio) diesel. Our technology's exceptional performance and reliability is guaranteed to provide power 24/7, 365 days a year.

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Nominal output kVA	<b>53</b>
Nominal output kW	<b>43</b>
Payback (years)	<b>1.8 to 2.3</b>
Fuel savings p.a.	<b>\$95,000</b>
CO <sub>2</sub> savings p.a.	<b>128,000 kgs</b>

This solar optimised hybrid generator has stable and green off-grid power supply. Businesses can expect high scalability and expansion potential as well as realisable fuel and carbon savings. It is easily transportable by road, rail, or sea and is operational within 30 minutes of delivery.

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### BLACK STUMP **Solarator** compact 75+

Nominal output kVA	<b>76</b>
Nominal output kW	<b>61</b>

### BLACK STUMP **Solarator** compact 100+

Nominal output kVA	<b>106</b>
Nominal output kW	<b>84</b>

### BLACK STUMP **Solarator** compact 150+

Nominal output kVA	<b>151</b>
Nominal output kW	<b>121</b>

These models come with bigger batteries compared to our fold-out range, and a more powerful back-up (bio) diesel generator combined with solar panels. Solar arrays can be added for more clean solar energy.

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# BLACK STUMP Solarator<sup>®</sup> mini 12+

Nominal output kVA	12
Nominal output kW	10
Payback (years)	1.5 to 1.8
Fuel savings p.a.	\$44,000
savings p.a.	59,000 kgs

Smaller load requirements and space restrictions need creative solutions. Our Solarator<sup>®</sup> Mini is a solar power generator that sits on a box trailer or skid mounted mechanism that solves a lot of logistical concerns in small scale, temporary sites. This innovative design allows for rapid deployment, easy storage, and full mobility. Despite its size, our Solarator<sup>®</sup> Mini is built to industrial standards and comes with the same alchemy of solar, battery, and (bio) diesel configuration as the bigger Solarator<sup>®</sup> products ensuring robust performance and reliability 24/7, 365 days a year, in all conditions.



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Our Solarator® microgrid is the world's first rapidly deployable renewable energy solution that can generate megawatts of clean, renewable power. It is a fully integrated and highly scalable solution that uses three sources of energy: solar, battery, and (bio) diesel. It operates independently from the main power grid making it a reliable choice in locations that experience frequent power outages, weather disturbances, or unreliable grid infrastructure. Our Solarator® microgrid eliminates time, cost and hassle involved in building fixed solar infrastructure because of its turnkey mobile, modular and rapidly deployable design.

Depending on the scale of installation, fuel and cost savings vary but a payback period of 2.5 years has been observed at Black Stump Technologies' current installations.

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## ● SOLARATOR® DEPLOYMENTS



📍 Australia



📍 Bahamas



📍 Djibouti



📍 Spain

## ● COLD-CHAIN RANGE



# USING SOLAR TO SOLVE COLD-CHAIN

Our mobile Solarators® are specifically designed for high performance, temperature-controlled cold storage operations. Each mobile chiller, freezer or ice-maker is 100% solar powered with battery back-up requiring no fuel, generator or grid connection, giving you the reassurance of an uninterrupted and reliable power supply. The estimated payback period is often immediate. However, individual business cases will result in varying degrees of operational savings and returns.



**NO FUEL, DIESEL GENSET  
OR GRID CONNECTION  
REQUIRED**



**MOBILE &  
MODULAR**



**OPERATIONAL IN  
15 MINS**



**100% SOLAR  
POWERED**



**IDEAL FOR  
REMOTE  
COMMUNITIES**



**DOWNLOADABLE ESG  
REPORT IN MINUTES**





Ambient operating temperature	5°C ~ 40°C
Water source	Manual fill
Fuel savings p.a.	\$120,000
CO <sub>2</sub> savings p.a.	160,000 kgs

Our Solarator® version of a commercial, industry-grade ice maker can produce up to 600 kgs of flake ice per day, or can be configured to make 300 kgs of block ice, too. It can produce ice using either freshwater or saltwater. With a rapidly deployable design, it can be stowed away at night or packed up during bad weather within minutes.



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Operating temperature	<b>+2 ~ +4°C</b>
Fuel savings p.a.	<b>\$120,000</b>
CO <sub>2</sub> savings p.a.	<b>160,000 kgs</b>

Our single zone cool room is 100% solar-powered and can operate 24/7 in any environment. The temperature can be pulled down to +4°C in minutes, making it an ideal solution for rapidly cooling harvest or horticulture products. It only takes 15 minutes and very minimal labour to unload and operate, and is easily transportable by road, rail or sea.



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Ambient operating temperature	5°C ~ 40°C
Internal temperature	-18°C
Fuel savings p.a.	\$160,000
CO <sub>2</sub> savings p.a.	214,000 kgs

Within 30 minutes, the temperature inside our Solarator® Freeze can be pulled to as low as -18°C. As with any Solarator® product, the unit is designed to be mobile, modular, rapidly deployable, and easily transportable by road, rail or sea. It is also hybrid and micro-grid friendly and comes with customisable energy storage.



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## ● SOLARATOR® DEPLOYMENTS



📍 Australia



📍 Papua New Guinea



📍 Vanuatu



📍 USA

## ● BATTERY RANGE



# FLEXIBLE ENERGY SOLUTIONS

Our range of battery boxes are fully integrated battery energy storage systems designed for convenient transportation, hassle-free maintenance, and simple operation. A battery box can be connected to an external PV power station, AC generator and grid power. Power and capacity of each Black Stump battery box can be expanded to suit different user needs and scenarios. Our battery energy storage systems are ideal solutions if your business wants to continue using its existing diesel generators.



100kWh – 2000kWh

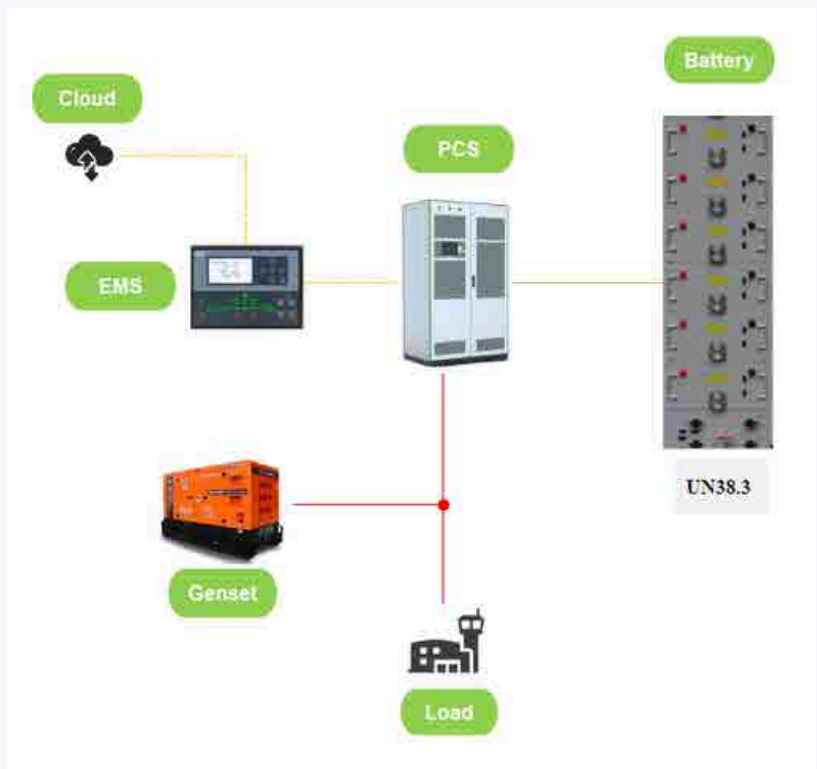
Battery Storage Capacity

50kW – 1000kW

Rated Output Power @ 25° C

400V@50Hz, 3ph

Rated Output Voltage



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**HIGH QUALITY  
MANUFACTURING  
TECHNOLOGY**



**MOBILE &  
MODULAR**



**SIMPLE  
OPERATION**



**BUILT-IN OUTLETS  
FOR OPERATION**



**LONG LIFE DESIGN  
UP TO 6000 CYCLES**



**INTELLIGENT PCS  
WITH EMS**



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## ● OUR GLOBAL FOOTPRINT

# Black Stump Technologies is a sustainability technology company operating globally.

Our core technology was developed to withstand the harshest Australian remote areas which means it will work anytime, anywhere in the world. Our Solarators® can be found in Australia, USA, the Pacific Islands, and Europe, with plans to expand in Middle East and Asia. Our impact is environmental, economic, and social. Our products are proven in assisting organisations to achieve their sustainability goals and operational objective of net zero. Our customers include global infrastructure companies, the highest levels of government, defence departments, international aid & development operations, and remote communities.





# The Black Stump Benefit



**SIGNIFICANT COST  
SAVINGS**



**EMISSIONS  
REDUCTION**



**ESG REPORT IN  
MINUTES**



**RELIABILITY IN ALL  
CONDITIONS**



**EASE OF USE &  
INSTALLATION**



# Get in touch

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